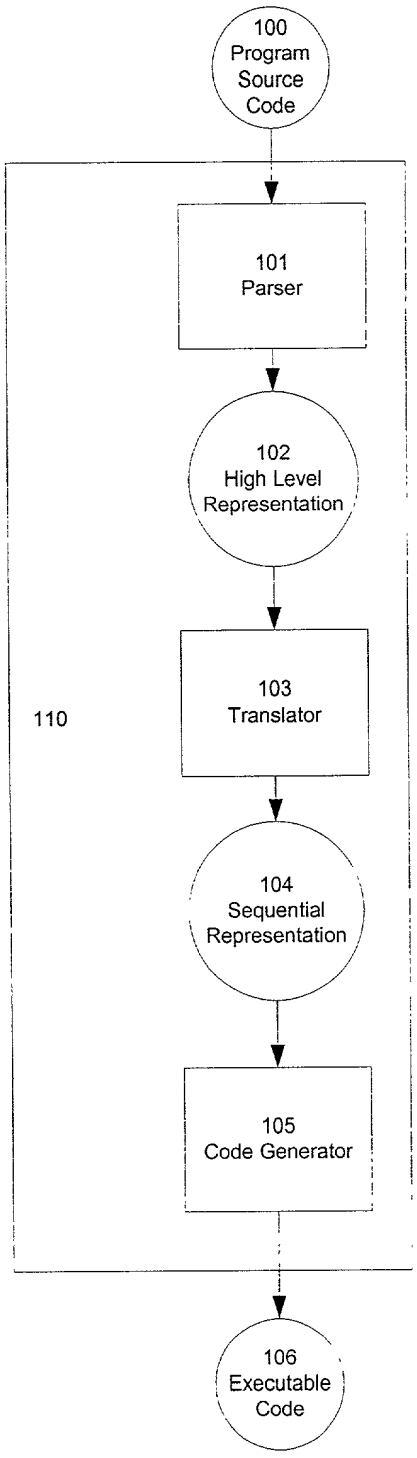
100
Program
Source
Code
101
Parser
102
High Level
Representation
103
Translator
110
104
Sequential
Representation
105
Code Generator
106
Executable
Code

Figure 1

Figure 2

200
P -> S | WS | SW | SP | WSP

205
S -> A | A, | AW, | D | D, | DW,

210
A -> V=E | VW=E | V=WE | VW=WE

215
E -> N | V | NON | NWON | NOWN | NWOWN | VON | VWON | VOWN | VWOWN | NOV | NWOV | NOWV | NWOWV | VOV | VWOV | VOWV | VWOWV

220
O -> + | - | * | /

225
D -> TWV

230
T -> t | c

235
N -> DI | -DI

240
DI -> 0 | 0DI | 1 | 1DI | 2 | 2DI | 3 | 3DI | 4 | 4DI | 5 | 5DI | 6 | 6DI | 7 | 7DI | 8 | 8DI | 9 | 9DI

245
V -> NRL | LVES

250
NRL -> a | b | d | e | f | g | h | j | k | l | m | n | o | p | q | r | s | t | u | v | w | x | y | z

255
L -> a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | q | r | s | t | u | v | w | x | y | z

260
VES -> N | NVES | L | LVES

265
W -> <space> | <space>W | <carriage return> | <carriage return>W

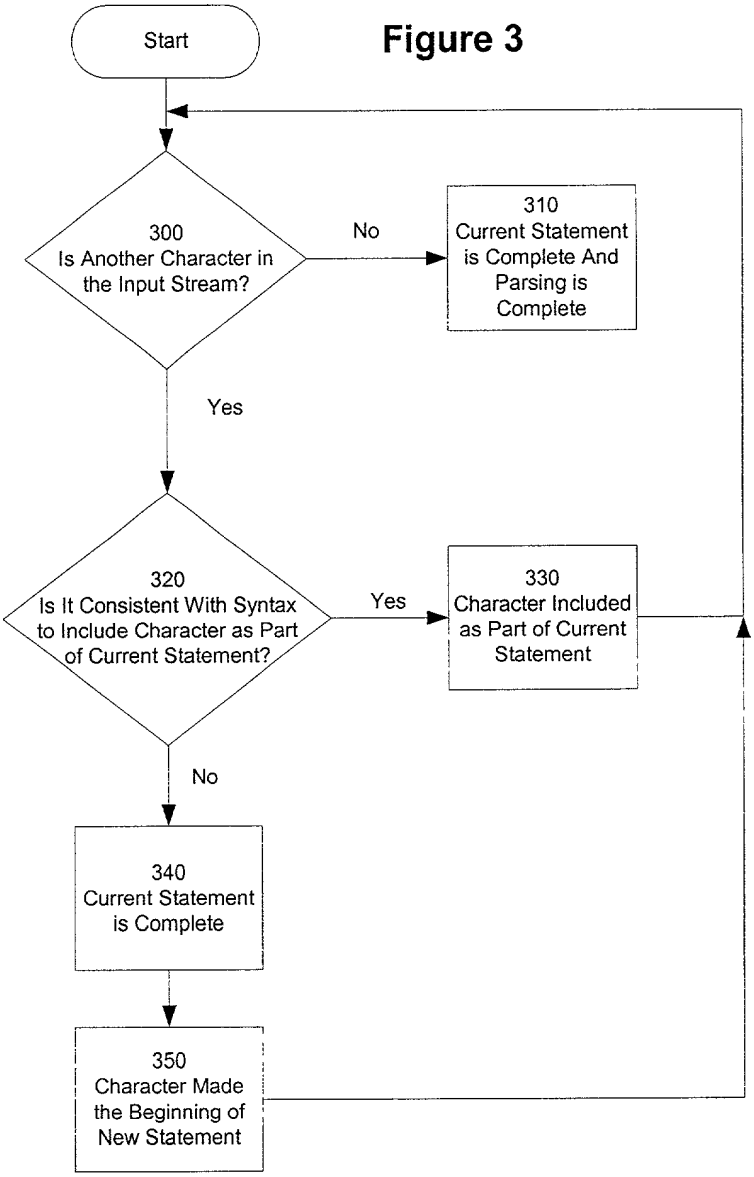
Start
300
Is Another Character in the Input Stream?
No
310
Current Statement is Complete And Parsing is Complete
Yes
320
Is It Consistent With Syntax to Include Character as Part of Current Statement?
Yes
330
Character Included as Part of Current Statement
No
340
Current Statement is Complete
350
Character Made the Beginning of New Statement

Figure 3

Figure 4

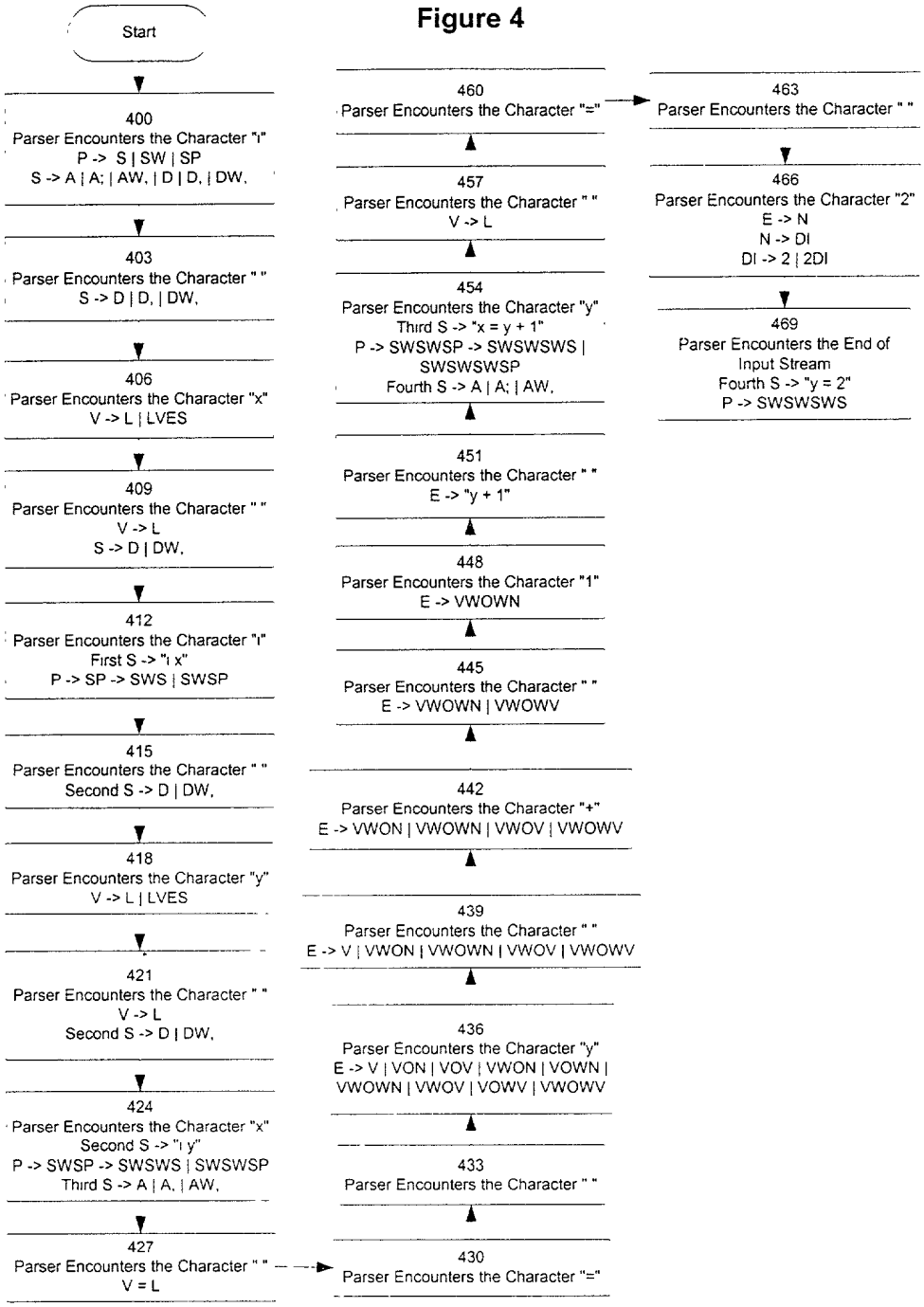
Start
400
Parser Encounters the Character "ı"
P -> S | SW | SP
S -> A | A; | AW, | D | D, | DW,
403
Parser Encounters the Character " "
S -> D | D, | DW,
406
Parser Encounters the Character "x"
V -> L | LVES
409
Parser Encounters the Character " "
V -> L
S -> D | DW,
412
Parser Encounters the Character "ı"
First S -> "ı x"
P -> SP -> SWS | SWSP
415
Parser Encounters the Character " "
Second S -> D | DW,
418
Parser Encounters the Character "y"
V -> L | LVES
421
Parser Encounters the Character " "
V -> L
Second S -> D | DW,
424
Parser Encounters the Character "x"
Second S -> "ı y"
P -> SWSP -> SWSWS | SWSWSP
Third S -> A | A, | AW,
427
Parser Encounters the Character " "
V = L
430
Parser Encounters the Character "="
433
Parser Encounters the Character " "
436
Parser Encounters the Character "y"
E -> V | VON | VOV | VWON | VOWN |
VWOWN | VWOV | VOWV | VWOWV
439
Parser Encounters the Character " "
E -> V | VWON | VWOWN | VWOV | VWOWV
442
Parser Encounters the Character "+"
E -> VWON | VWOWN | VWOV | VWOWV
445
Parser Encounters the Character " "
E -> VWOWN | VWOWV
448
Parser Encounters the Character "1"
E -> VWOWN
451
Parser Encounters the Character " "
E -> "y + 1"
454
Parser Encounters the Character "y"
Third S -> "x = y + 1"
P -> SWSWSP -> SWSWSWS |
SWSWSWSP
Fourth S -> A | A; | AW,
457
Parser Encounters the Character " "
V -> L
460
Parser Encounters the Character "="
463
Parser Encounters the Character " "
466
Parser Encounters the Character "2"
E -> N
N -> DI
DI -> 2 | 2DI
469
Parser Encounters the End of
Input Stream
Fourth S -> "y = 2"
P -> SWSWSWS

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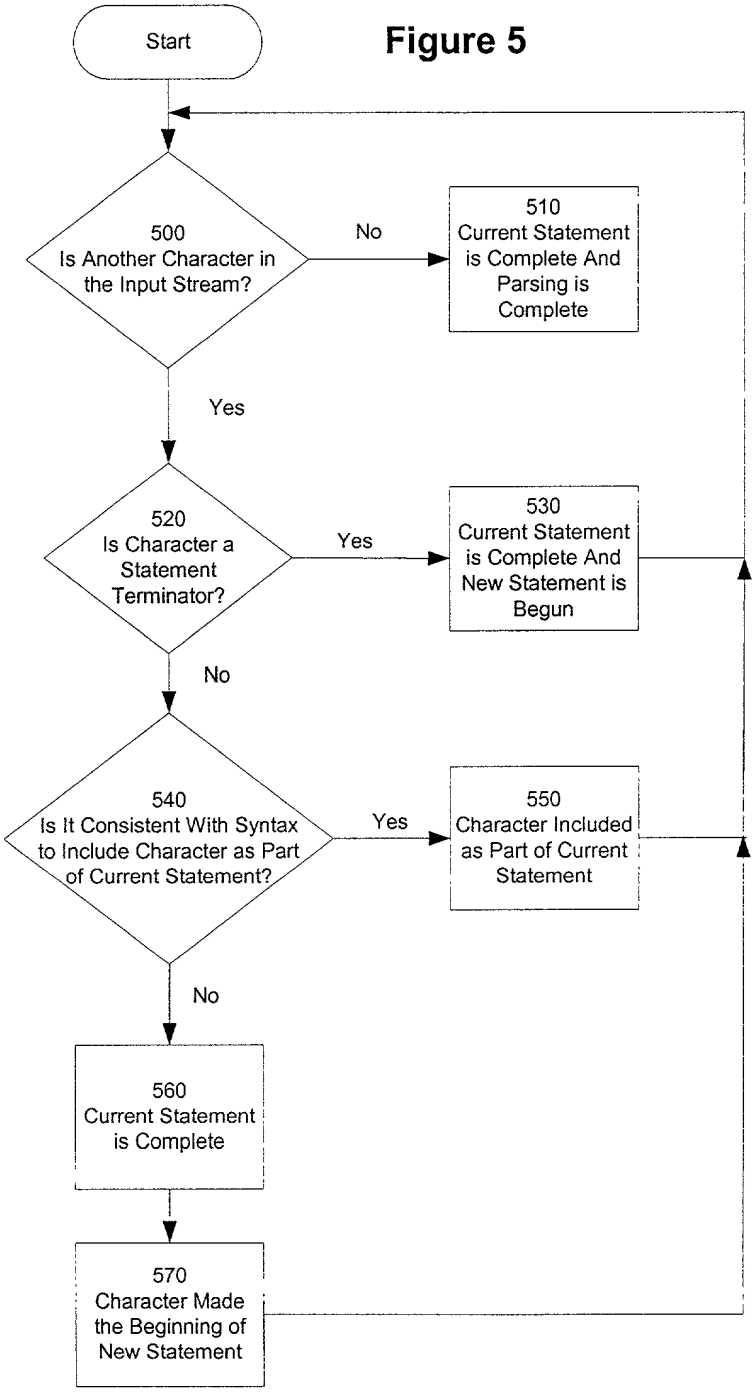
Figure 5



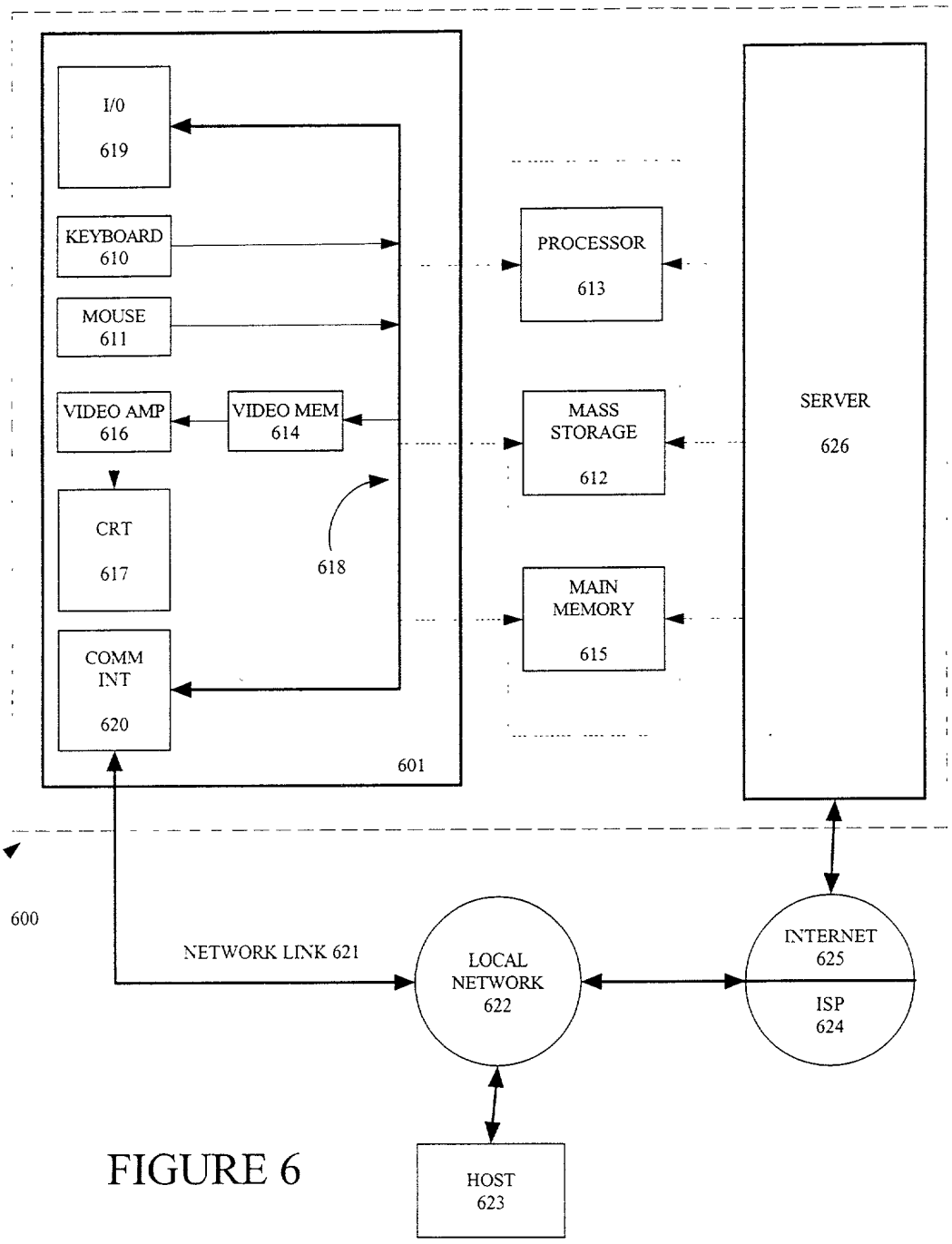

I/O
619
KEYBOARD
610
MOUSE
611
VIDEO AMP
616
VIDEO MEM
614
CRT
617
618
COMM
INT
620
601
PROCESSOR
613
MASS
STORAGE
612
MAIN
MEMORY
615
SERVER
626
600
NETWORK LINK 621
LOCAL
NETWORK
622
INTERNET
625
ISP
624
HOST
623

FIGURE 6